

White River National Forest

MOUNTAIN SPORTS PROGRAM

Project Planning

Ski Area General Design Criteria

Update: November 2018

General Design Criteria are planning measures that apply to all proposed ski area projects to ensure compliance with Forest Plan and other federal management direction. All proposed projects will be screened by the Forest Service to ensure these criteria are integrated before NEPA is initiated.

These criteria encapsulate applicable direction guiding management of National Forest System lands and natural resources contained therein. This includes White River National Forest Land and Resource Management Plan (Forest Plan), Forest Service Handbook and Manual Direction, and other Federal policy and guidance.

General Design Criteria

General

- G1 Any blasting and associated safety plans shall be approved by the Forest Service Responsible Official prior to blasting.
- G2 Facilities, including trails and signs, shall meet Forest Service Accessibility Guidelines.
- G3 Utility lines shall be buried
- G4 Develop signage plans to properly direct users and prevent user conflicts
- G5 A project construction management plan shall be developed by the resort and authorized by the Forest Service Responsible Official that details project timelines and contacts, disturbance boundaries, grading and site plans, staging and parking areas, and construction access.

Scenery

- S1 Design plans for all above ground structures and improvements including infrastructure, facilities, and buildings shall be reviewed and authorized through the White River Facility Design Review process. Structures should follow BEIG guidance, color and reflectivity guidelines, and meet SIOs for the project area.

Cultural

- C1 If undocumented historic and/or prehistoric properties are located during ground disturbing activities or planning activities associated with approved construction activities, all construction in the immediate vicinity shall cease and be treated as specified in 36 CFR §800.11. In addition, if there are resources determined eligible to the NRHP, the WRNF shall consult with the State Historic Preservation Officer (SHPO) and Tribal entities regarding mitigation of adverse effects to historic properties as outlined in 36 CFR 800.4 and 36 CFR 800.5.

Timber

- T1 Stumps should be cut as low as possible to the ground to avoid safety hazard and reduce scenery impacts .

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T2	A project timber management plans shall be developed by the resort and authorized by the Forest Service Responsible Official that details timber management, skid trail, deck area locations, and protocol for timber removal.
T3	Live trees shall be retained, where possible, to provide species and size diversity, maintain forest cover, and screen facilities.
T4	Straight edges shall be avoided where possible when removing trees. Variable density cutting (feathering) and age and size class selection should be utilized to create a more natural edge that blends into the existing vegetative structure.
T5	Engelmann spruce that are felled shall be either removed from the ski area or treated within one year after felling to prevent infestation of spruce bark beetle. Treatments may include burning, burying or peeling the bark off felled trees.
T6	Winter logging should be implemented whenever possible to protect the ground surface from disturbance.
T7	Logs should not be skided on sustained slopes steeper than 40%.

Sensitive and Rare Plants

SR1	Before implementing any approved project activities, the specific project areas shall be surveyed using established protocol. Surveys shall be conducted for Threatened, Endangered, Proposed and Candidate Species, Forest Service Sensitive Species, and Species of Local Concern (SOLC).
SR2	All disturbed ground will be re-vegetated with desirable plant species. Utilize seed mix approved by the Forest Botanist and certified to be free of weed species. Seed mixes that incorporate native plant species similar to those within the Project Area are desirable. Any mulch used in re-vegetation efforts must be certified to be free of weed species.

Noxious and Invasive Species

N1	A noxious weeds and non-native plant risk assessment and treatment plan shall be completed by the resort and approved by WRNF staff prior to implementation of any authorized ground disturbing activities.
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General Design Criteria

Fish and Wildlife

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| FW1 | If tree cutting activities are proposed prior to July 15, surveys for active migratory bird nests should be conducted by a qualified biologist prior to tree cutting. Trees with active nests and snags providing cavity nesting habitat should be retained when practicable, or as otherwise approved by the Forest Service Responsible Official. |
| FW2 | Surveys for the denning/nesting of threatened, endangered, and sensitive species by a qualified biologist shall be conducted prior to construction season if construction activities are proposed prior to July 15. Construction of approved projects shall occur, to the extent practicable, outside the active denning/nesting period or as otherwise approved by the Forest Service Responsible Official. |
| FW3 | If flamulated or boreal owl nests are located within project areas, direct mortality of eggs and/or nestlings shall be avoided by conducting tree removal in nesting habitat outside of the May 21 to July 15 nesting period, or as otherwise approved by the Forest Service Responsible Official. |
| FW4 | If olive-sided flycatcher nests are located within project areas, direct mortality of eggs and/or nestlings shall be avoided by conducting tree removal in nesting habitat outside of the June 1 to July 15 nesting period, or as otherwise approved by the Forest Service Responsible Official. |
| FW5 | Surveys for active raptor nests/cavities shall be conducted by a qualified biologist prior to construction season if construction is to occur prior to July 31. To allow for successful nesting and young rearing, no project ground disturbing activities or tree cutting shall be allowed within 0.25 mile of active raptor nests/cavities until after July 31, or if fledging has occurred (confirmed by a qualified biologist), or as otherwise approved by the Forest Service Responsible Official. |
| FW6 | To reduce the risk for human/wildlife conflicts in areas where food or trash could be present, all trash containers should be bear proof and any locations that have food products stored outside of a building must have bear proof food containers. |
| FW7 | All construction activities shall be confined to daylight hours, excluding emergencies. |
| FW8 | Workers shall not bring dogs on site during construction. |

Soils, Waters and Wetlands

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W1	Restoration - A Post-construction revegetation and restoration plan shall be developed by the resort and authorized by the Forest Service Responsible Official that details restoration methodology, locations, vegetative mixes and soil amendments.
W2	Grading Plans - Grading plans and erosion control plans shall be prepared for projects that involve grading. Existing topography should be displayed in two-foot contour intervals with cut/fill areas shown at a scale appropriate for construction. Grading plans should also display adjacent wetlands and streams, construction staging areas, topsoil stockpiling areas, and erosion control and drainage measures intended to protect soil and water resources. Contour intervals should be commensurate with project size and scope.
W3	Grading Layout – Grading limits shall be marked on the ground before construction by placing stakes, flagging, wattles, sediment fence, construction fence or some physical barrier along the perimeter of the area to be graded.
W4	Topsoil Storage – Topsoil shall be conserved by removing and stockpiling the O horizon and A horizon of the soil profile before bulk grading occurs. Topsoil should be separated and protected while rough grading occurs, then reapplied to establish final elevations. Topsoil should be amended as necessary to achieve pre-treatment levels of soil organic matter.
W5	Drainage Control - For ground-disturbing activities near perennial and intermittent streams, Connected Disturbed Area should be minimized by ensuring that graded areas, roads, road ditches, and other disturbed areas drain to undisturbed soils rather than directly to streams. Drainage from disturbed areas should be managed using natural topography, rolling dips, waterbars, ditch-relief culverts, and other practices to disconnect disturbed areas from streams.
W6	Sediment Control - Fills should not be encroached and soils should not be introduced into streams, wetlands, or ephemeral draws. These features should be protected from sediment by utilizing BMPs before ground-disturbing activities begin. Whenever possible, natural or biodegradable erosion control products should be employed that can be left in place.
W7	Erosion Control – Apply mulch, such as weed-free straw or hydro-mulch on graded areas. For graded slopes 33% or steeper, install biodegradable erosion control blanket or erosion control matting to protect slopes from rain-splash and wind erosion.

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W8	Equipment Restrictions - Keep heavy equipment out of streams except to cross at locations designated by the USFS. Do not add or remove rocks, wood, or other material to or from streams unless approved by the USFS.
W9	Culvert Restrictions - For roads and trails that must cross streams, use bridges instead of culverts whenever possible. Do not install culverts on perennial or intermittent streams without USFS approval. Size approved culverts to meet or exceed the bank-full width of streams. Do not use culverts less than 18" in diameter to cross any stream channel.
W10	Construction near Wetlands - Before project implementation, wetland boundaries shall be delineated within the vicinity of any ground disturbing activities. Equipment and ground vehicles shall be kept out of wetlands unless a temporary wetlands crossing is approved by the Forest Service Responsible Official. For approved temporary crossings, construction mats or other physical barriers shall be employed to protect against soil displacement and minimize the number of passes. Water supply or drainage patterns into wetlands shall not be interrupted.
W11	Operations near Wetlands - Snow cats, snowmobiles or other machinery shall not be operated over wetlands unless protected by 1 foot of packed snow and 2 inches of frozen soil. Operations shall cease when snow cover is not adequate to protect wetland soil from disturbance.
W12	Willow Clipping – Willows in or near wetlands should not be clipped unless authorized by the Forest Service Responsible Official. Where approved, willows should not be clipped shorter than twelve inches.
W13	Activities near Streams – Within the Water Influence Zone (WIZ) -- generally all ground within 100 feet of the edge of streams-- all ground disturbing activities and vegetation removal shall be prohibited unless specifically approved by the Forest Service Responsible Official. Permanent infrastructure and temporary disturbance areas should be located outside of the WIZ. Implementation plans should minimize the number of stream crossings.
W14	Soil Moisture Considerations – Ground-disturbing activities during periods of heavy precipitation or when soils are excessively wet or muddy and prone to rutting and compaction shall be avoided.
W15	Road Construction - Construct temporary roads, maintenance roads and emergency egress routes to the minimum width necessary for the intended use. Wherever possible, outslope roads to shed water rather than concentrating water on the road surface or in ditches. Construct rolling dips to facilitate

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W16	Road Layout - Do not locate roads, trails, or other disturbed areas on slopes that show signs of instability, such as slope failure, mass movement, or slumps.
W17	Road Surfacing at Stream Crossings - For projects that would increase road traffic, or require road use by heavy construction equipment, road surfacing near stream crossings should be applied as needed to harden the road surface and minimize sediment delivery to streams.
W18	Trail Layout - Trails should not be routed directly down the fall line or down the bottom of ephemeral draws. Trails should be designed and constructed to the minimum width consistent with the intended use (e.g. volume and user ability level).
W19	Trail Drainage - Roads and trails should be aligned using natural topography to create grade reversals or rolling dips to facilitate maintenance-free drainage. Waterbars, ditches and cross drains should be used only when grade reversals and rolling dips are not practical. Drainage structures should be installed above steep stretches of trail to minimize the amount of water that gets routed onto steeps.
W20	Stream Crossings on trails - Stream crossing should be minimized when designing trails. Bridges, boardwalks, or other spanning structures should be employed to cross streams, wetlands and riparian areas. Rolling dips or grade reversals should be employed on the approach to streams to drain trail runoff into undisturbed soils rather than directly into streams.
W21	Debris restrictions - All debris generated by project activities should be kept out of streams, road ditches, and other drainage features.